

In the ClaimsClaim 1 (currently amended):

DI An isolated polynucleotide sequence obtained from *Chlamydia trachomatis* comprising the a polynucleotide sequence encoding a polypeptide selected from the group consisting of SEQ ID NO. 1083, SEQ ID NO. 1089, SEQ ID NO. 1091, SEQ ID NO. 1095, SEQ ID NO. 1096, SEQ ID NO. 1105, SEQ ID NO. 1117, SEQ ID NO. 1140, SEQ ID NO. 1159, ~~or~~ and SEQ ID NO. 1167; or

an isolated polynucleotide sequence encoding a polypeptide that has having at least 80% homology to a polypeptide selected from the group consisting of SEQ ID NO. 1083, SEQ ID NO. 1091, SEQ ID NO. 1095, SEQ ID NO. 1096, SEQ ID NO. 1105, SEQ ID NO. 1117, SEQ ID NO. 1140, SEQ ID NO. 1159, ~~or~~ and SEQ ID NO. 1167; ~~or~~

~~an isolated polynucleotide sequence that has at least 99.9% homology to SEQ ID NO. 1089, SEQ ID NO. 1083, SEQ ID NO. 1091, SEQ ID NO. 1095, SEQ ID NO. 1096, SEQ ID NO. 1105, SEQ ID NO. 1117, SEQ ID NO. 1140, SEQ ID NO. 1159, or SEQ ID NO. 1167;~~

Claim 2 (currently amended):

An isolated polynucleotide sequence that hybridizes to a *Chlamydia trachomatis* polynucleotide sequence ~~comprising the sequence~~ encoding a polypeptide selected from the group consisting of SEQ ID NO. 1083, SEQ ID NO. 1089, SEQ ID NO. 1091, SEQ ID NO. 1095, SEQ ID NO. 1096, SEQ ID NO. 1105, SEQ ID NO. 1117, SEQ ID NO. 1140, SEQ ID NO. 1159, ~~and~~ or SEQ ID NO. 1167, under conditions of high stringency, wherein said hybridizing polynucleotide sequence is complementary to a polynucleotide sequence that encodes a polypeptide having ~~has~~ at least 80% homology to ~~a the complementary sequence~~ polypeptide selected from the group consisting of SEQ ID NO. 1083, SEQ ID NO. 1091, SEQ ID NO. 1095, SEQ ID NO. 1096, SEQ ID NO. 1105, SEQ ID NO. 1117, SEQ ID NO. 1140, SEQ ID NO. 1159, ~~or~~ and SEQ ID NO. 1167; or ~~at least 99.9% homology to the complementary sequence~~ wherein said hybridizing polynucleotide sequence is complementary to a polynucleotide sequence that encodes a polypeptide identical to SEQ ID NO. 1089.

Claim 3 (currently amended):

An isolated polynucleotide sequence that hybridizes to a *Chlamydia trachomatis* polynucleotide sequence ~~comprising the sequence encoding a polypeptide selected from the group consisting of~~ SEQ ID NO. 1083, SEQ ID NO. 1089, SEQ ID NO. 1091, SEQ ID NO. 1095, SEQ ID NO. 1096, SEQ ID NO. 1105, SEQ ID NO. 1117, SEQ ID NO. 1140, SEQ ID NO. 1159, ~~or and~~ SEQ ID NO. 1167, under conditions of intermediate stringency, wherein said hybridizing polynucleotide sequence is complementary to a polynucleotide sequence that encodes a polypeptide having ~~has~~ at least 80% homology to a polypeptide ~~the complementary sequence selected from the group consisting of~~ SEQ ID NO. 1083, SEQ ID NO. 1091, SEQ ID NO. 1095, SEQ ID NO. 1096, SEQ ID NO. 1105, SEQ ID NO. 1117, SEQ ID NO. 1140, SEQ ID NO. 1159, ~~or and~~ SEQ ID NO. 1167; ~~or at least 99.9% homology to the complementary sequence wherein said hybridizing polynucleotide sequence is complementary to a polynucleotide sequence that encodes the polypeptide of~~ SEQ ID NO. 1089.

Claims 4-7 (canceled)

Claim 8 (previously amended):

A polynucleotide encoding a fusion protein, comprising ~~one of ORF2 to ORF 1197 of a~~ polynucleotide according to Claim 1, 2, or 3 ligated in frame to a polynucleotide encoding a heterologous polypeptide.

Claim 9 (original):

A recombinant vector that contains the polynucleotide of Claims 1, 2, or 3, 4, 5 or 6.

Claim 10 (original):

A recombinant vector that contains the polynucleotide of Claim 8.

Claim 11 (original):

A recombinant vector that contains the polynucleotide of Claim 1, 2, or 3, ~~4, 5 or 6~~, operatively associated with a regulatory sequence that controls gene expression.

Claim 12 (original):

A recombinant vector that contains the polynucleotide of Claim 8 operatively associated with a regulatory sequence that controls gene expression.

Claim 13 (currently amended):

A genetically engineered host cell that contains the polynucleotide of Claim 1, 2, or 3, or a recombinant vector according to Claims 10 or 12 ~~4, 5 or 6~~.

Claim 14 (currently amended):

A genetically engineered host cell that ~~contains~~ comprises the polynucleotide of Claim 8, or a recombinant vector according to Claims 10 or 12.

Claim 15 (original):

A genetically engineered host cell that contains the polynucleotide of Claim 1, 2, or 3, ~~4, 5, or 6~~ operatively associated with a regulatory sequence that controls gene expression in the host cell.

Claim 16 (original):

A genetically engineered host cell that contains the polynucleotide of Claim 8 operatively associated with a regulatory sequence that controls gene expression in the host cell.

Claims 17-29 (withdrawn)

Claim 30 (original):

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A DNA chip containing an array of polynucleotides comprising at least one of the polynucleotides of Claim 1, 2, or 3, 4, 5, or 6.

Claims 31-50 (withdrawn)

Claim 51 (original):

A kit comprising a container containing an isolated polynucleotide of Claim 1, 2, or 3, 4, 5 or
6.

Claim 52 (original):

The kit of Claim 51 wherein the polynucleotide is a primer or a probe.

Claims 53-56 (withdrawn)

Claim 57 (currently amended):

The An isolated polynucleotide sequence according to Claim 1, comprising a polynucleotide that encodes a polypeptide sequence selected from the group consisting of SEQ ID NO. 1083, SEQ ID NO. 1089, SEQ ID NO. 1091, SEQ ID NO. 1095, SEQ ID NO. 1096, SEQ ID NO. 1105, SEQ ID NO. 1117, SEQ ID NO. 1140, SEQ ID NO. 1159, or SEQ ID NO. 1167 wherein the said polynucleotide that encodes the polypeptide sequence has the polynucleotide sequence of the genomic DNA obtainable from ~~is contained within the *Chlamydia trachomatis* genomic DNA in~~ ECACC Deposit No. 98112618.

Claim 58 (currently amended):

D1 The An isolated polynucleotide sequence comprising a polynucleotide sequence that encodes a polypeptide sequence selected from the group consisting of SEQ ID NO. 1083, SEQ ID NO. 1089, SEQ ID NO. 1091, SEQ ID NO. 1095, SEQ ID NO. 1096, SEQ ID NO. 1105, SEQ ID NO. 1117, SEQ ID NO. 1140, SEQ ID NO. 1159, or SEQ ID NO. 1167, wherein the polynucleotide that encodes the polypeptide sequence has the polynucleotide sequence of the clone DNA obtainable from ~~according to Claim 1, wherein said polynucleotide sequence is contained within a clone insert in~~ ECACC Deposit No. 98112617.

Claim 59 (currently amended):

~~The An isolated polynucleotide encoding a fusion protein according to claim 8, wherein said polynucleotide encoding a heterologous polypeptide encodes an affinity tag sequence comprising:~~

- a) nucleotides 78482 to 78736 of SEQ ID NO: 1 (ORF 1083);
- b) a polynucleotide sequence complementary to nucleotides 112069 to 111734 of SEQ ID NO: 1 (ORF 1089);
- c) a polynucleotide sequence complementary to nucleotides 114017 to 113715 of SEQ ID NO: 1 (ORF 1091);
- d) nucleotides 144164 to 144427 of SEQ ID NO: 1 (ORF 1095);
- e) a polynucleotide sequence complementary to nucleotides 150698 to 150369 of SEQ ID NO: 1 (ORF 1096);
- f) a polynucleotide sequence complementary to nucleotides 197313 to 197083 of SEQ ID NO: 1 (ORF 1105);
- g) nucleotides 303155 to 303469 of SEQ ID NO: 1 (ORF 1117);
- h) nucleotides 467981 to 468262 of SEQ ID NO: 1 (ORF 1140);
- i) nucleotides 610110 to 310391 of SEQ ID NO: 1 (ORF 1159);
- j) a polynucleotide sequence complementary to nucleotides 679528 to 679253 of SEQ ID NO: 1 (ORF 1167);
- k) a polynucleotide encoding claim 59(a) through claim 59(l) fused, in frame, to a heterologous polynucleotide sequence; or
- l) a polynucleotide according to claim 59(a) through claim 59(k) operatively associated with a regulatory sequence that controls gene expression.

Claim 60 (new):

A recombinant vector comprising a polynucleotide according to claim 59(a) through claim 59(l).

Claim 61 (new):

A genetically engineered host cell comprising a recombinant vector according to claim 60.

Claim 62 (new):

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A DNA chip comprising a polynucleotide according to claim 59(a) through claim 59(i).
